Remarks

The specification has been amended only to conform the figure designations with the formal drawings filed concurrently herewith. No new matter is added by way of this amendment. Entry thereof is respectfully requested.

Claims 1-32 and 34 have been canceled without prejudice to or disclaimer of the subject matter therein. Claim 33 is active in this application. No new matter is believed to have been added by this amendment. Entry of the above amendment is respectfully requested.

Respectfully submitted,

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Date: September 28, 2001

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Version with markings to show changes made

In the Specification:

The paragraph bridging pages 7 and 8 of the specification has been amended as follows:

[Fig. 1 depicts] Figs. 1A-1C depict the nucleotide and translated amino acid sequence (Seq ID Nos. 1 and 2) of the AD7c-NTP cDNA. The shaded region corresponds to the nucleic acid sequences detected in 6 AD brains by RT-PCR analysis of mRNA. The cDNA exhibits significant homology with Alu gene, and to an unknown gene in the Huntington region, Chromosome 4q16.3 (underlined). The open reading frame begins with the first methionine codon. The translated amino acid sequence encodes a 41.3 kD protein with a hydrophobic leader sequence (italics) followed by a myristoylation motif (bold, italics) and potential AI cleavage site. That same region (italics, underlined) exhibits significant homology with the insulin/IGF-1 chimeric receptor. There are 17 potential glycogen synthase kinase-3, protein kinase C, or cAMP or Ca-dependent kinase II phosphorylation motifs and one transforming growth factor (tgf) motif (double underlined). The embolded amino acid sequences exhibit significant homology with the A4 alternatively spliced mutant form of NF2, β subunit of integrin, and human decay accelerating factor 2 precursor. The boxed amino acid sequences exhibit significant homology with human integral membrane protein and myelin oligoglycoprotein-16.

The first full paragraph at page 8 of the specification has been amended as follows:

[Figs. 2A-2D] Figs. 2A-2F depict AD7c-NTP expression *in vitro* and *in vivo*. (2A): Recombinant protein detected by *in vitro* translation using sense strand cRNA transcripts. (2B): Western blot analysis of purified recombinant protein demonstrating specific immunoreactivity with the Tag and N3I4 AD7c-NTP monoclonal antibodies, but not with non-relevant FB50 monoclonal antibody. (2C): Western blot analysis of BOSC cells stably transfected with pcDNA3-AD7c-NTP or pcDNA3 (empty vector). The blots were probed with the N3I4 AD7c-NTP antibody. (2D): Significantly increased levels of the 41-45 kD AD7c-NTP protein in AD frontal lobe relative to age-matched control frontal lobe tissue. Similar results were obtained for temporal lobe tissue. (2E): Higher levels of the 41-45 kD and 19-21 kD AD7c-NTP proteins in late, end-stage (L) AD compared with early, less symptomatic (E) AD. All tissue samples were taken from the frontal lobe. Note the clusters of 3 or 4 bands between ~41 and ~45 kD, probably corresponding to different degrees of phosphorylation. (2F): Western blot analysis of postmortem ventricular fluid demonstrating higher levels of the ~41 kD AD7c-NTP molecules in AD compared with aged control samples using the N3I4 antibody. The ~28-30 kD band may represent a degradation product. Also note detection of the ~19-21 kD N3I4-immunoreactive molecules in AD.

In the Claims:

Claim 33 has been amended as follows:

33. (once amended) A method [for to treat or prevent dementias of the Alzheimer's type of neuronal degeneration; or] to treat or prevent neuroectodermal tumors, malignant astrocytomas, or glioblastomas, comprising administering to an animal in need thereof an antisense oligonucleotide which is complementary to an NTP mRNA sequence corresponding to nucleotides 150-1139 of Seq. ID No. 1, a ribozyme comprising a target sequence which is complementary to an NTP mRNA sequence corresponding to nucleotides 150-1139 of Seq. ID No. 1, a triple helix-forming oligonucleotide with the a region of AD7c-NTP coding nucleic acid and having the sequence 3'X5'-L-5'X3' or having the sequence 5'X3'-L-3'X5', wherein X comprises an AD7c-NTP nucleic acid sequence corresponding to nucleotides 150-1139 of Seq. ID No. 1, and wherein L represents an oligonucleotide linker or a bond, or an ribonucleotide external guide nucleic acid molecule comprising a 10-mer nucleotide sequence corresponding to nucleotides 150-1139 of Seq. ID No. 1 fused to a 3'NCCA nucleotide sequence, wherein N is a purine [sequence of any one of claims 17, 24, 26, 28, or 30].

necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

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Encls.

SKGF_268367.1